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MONSANTO 800 NORTH LINDBERGH BOULEVARD
ST. LOUIS, MISSOURI 63166



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FIRST CLASS MAIL

TO

Mr. J. Nelson
Systems Consultant
Schooleys Mountain, N. J. 07870

Monsanto

NEW ENTERPRISE DIVISION

Monsanto Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
(314) OXford 4-1000

Mr. J. Nelson
Systems Consultant
Schooleys Mountain, N. J. 07870

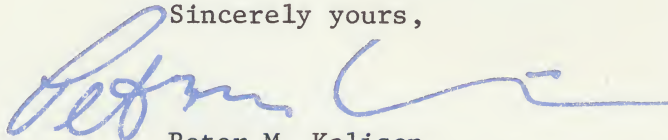
Dear Mr. Nelson:

Thank you for your recent inquiry about AstroTurf®. You might be interested to know that AstroTurf is not just one surface, but a series of specially engineered recreational surfaces for specific uses. We also have a general landscaping surface, Chemgrass®.

Enclosed is some literature on the AstroTurf surfaces. If you would like further information please contact the district office nearest you listed on the back of the brochure.

We appreciate your interest in AstroTurf.

Sincerely yours,



Peter M. Kalison
Manager, Advertising & Promotion
AstroTurf Recreational Surfaces

PMK/gil
Enclosures

AstroTurf®

Monsanto Recreational Surfaces



Houston Astrodome

**INTRODUCES
A FAMILY OF ALL-WEATHER
RECREATIONAL SURFACES**

AstroTurf Recreational Surfaces

AstroTurf Recreational Surfaces are a family of All-Weather Recreational Surfaces constructed of modern, man-made materials developed through more than fifteen years of fiber-producing experience. Specifically, it is a field of green, manicured, nylon grass-like blades under which is fastened a resilient pad. The length of these grass-like blades as well as the weight and thickness of the pad vary considerably and are determined by the specific end-use for which the surface is intended. Different prices are set forth for *each* manufacturing

specification designated for *each* end-use. AstroTurf combines resilience and flexibility of application with extraordinary durability and ease of maintenance. It is scientifically engineered to outperform ordinary grass surfaces *outdoors* as well as *indoors*. The "life" of AstroTurf is determined by the actual physical location of the installation and the end-use of the surface. Colors other than green are being evaluated. However, green is the only color available at this time.

Installation

AstroTurf can be installed over prepared dirt, wood, asphalt, cement, or any firm, smooth surface.

Anchoring techniques on or around all installations will be determined by the end-uses of AstroTurf. Recommendations will be set forth by the Monsanto Field Representative. Seaming and other means of blending sections of AstroTurf together present no problems and a number of techniques for ensuring adequate drainage have been successfully tested.

Major installations will be supervised by Monsanto Technical Field Representatives.

A formal cost and installation proposal will be submitted by Monsanto with reference to each site. Installation costs will be determined only after a thorough evaluation and inspection of the proposed site by Monsanto Field Representatives.

The extent of any required pre-preparation of the sub-surface will also be set forth by Monsanto Field Representatives. The completion of recommended pre-preparation is the responsibility of the purchaser. Installations can be tailored to any size or shape. It is available in portable, semi-portable and permanent installations.

Maintenance

AstroTurf is normally cleaned by water, with or without a mild detergent or by vacuum cleaner. Stubborn stains can be cleaned by a mild stain remover. For most outdoor installations, normal rainfall provides adequate cleaning.

Repairs are easily accomplished by simply cutting out the designated area and replacing it with another matched piece in accordance with published maintenance procedures.

Striping or lining is accomplished by regular field-marking equipment or by spraying with prescribed paint. Temporary lines can be easily removed resulting in greater versatility.

If local maintenance or grounds personnel are available to assist in the installation, it will help a great deal in their familiarization with AstroTurf for future care.

In initial price, low maintenance costs and years of use, AstroTurf is an all-star performer.

Advantages

AstroTurf provides a *portable, semi-portable, or permanent* surface ideally suited for a *wide variety of sports and recreational activities* at *reasonable cost*. AstroTurf combines *low maintenance* costs with extraordinary *durability* for *maximum economy*. The surface is *clean and uniform* providing *firm traction* together with the added security of a *fire resistant safety surface* as well as *all-weather capabilities*. *Field markings* can be changed at will for *greater flexibility* and it can be *custom-*

tailored to meet specific *space-utilization requirements*. Wherever it is used, AstroTurf lends the added *aesthetic beauty of natural grass* to its surroundings. *Maintenance* is a snap, too. When necessary, it is *easily repaired*, and it can be *cleaned with plain water*, in most cases. And with AstroTurf, there's *no seeding, fertilizing, weeding, or mowing*. AstroTurf is *non-toxic, non-allergenic, rot and mildew proof* and can be made *waterproof*.

AstroTurf Goes Where The Action Is

Withstands *baseball spikes, football cleats, and other cleated footwear* as well as *golf spikes*. *No divots. No watering*. A year 'round performer, *winter, summer,*

spring and fall—fair or inclement weather. How rugged can you get! *Durability is phenomenal both indoors and outdoors*.

ALL-WEATHER ACTION



No worry, no fuss, year-in, year-out; you'll have a uniform, true putting surface. Putting strips or greens will "do the trick".

"Instant la
comes a re
laine Ho
Montreal.
AstroTurf
cial "show

Bench side-line areas of AstroTurf provide comfort, safety and tailored beauty to an area that is constantly void of natural grass. Tully Stadium, Houston, Texas.

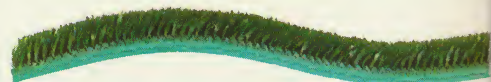
AstroTurf

Monsanto Recreational S

AstroTurf golf tee areas require no costly maintenance.

True ball bounce and firm traction contribute to the performance of any game. AstroTurf was engineered for baseball spikes.

AstroTurf offers the ultimate surface for football under any weather conditions. Fewer injuries and superb traction highlight a long list of advantages that includes everyday usage and flexibility of events.



The boys and girls at The Lincoln School, Providence, Rhode Island benefit from the clean, grassy environment created by AstroTurf. It is the true safety surface.



DOMES-STADIUMS-FIELD HOUSES-GYMNASIUMS



Football on AstroTurf stadium surface — Memorial Stadium, Seattle, Washington — November, 1967



Houston Astros vs Los Angeles Dodgers, National League, Astrodome, Houston, Texas — April, 1966



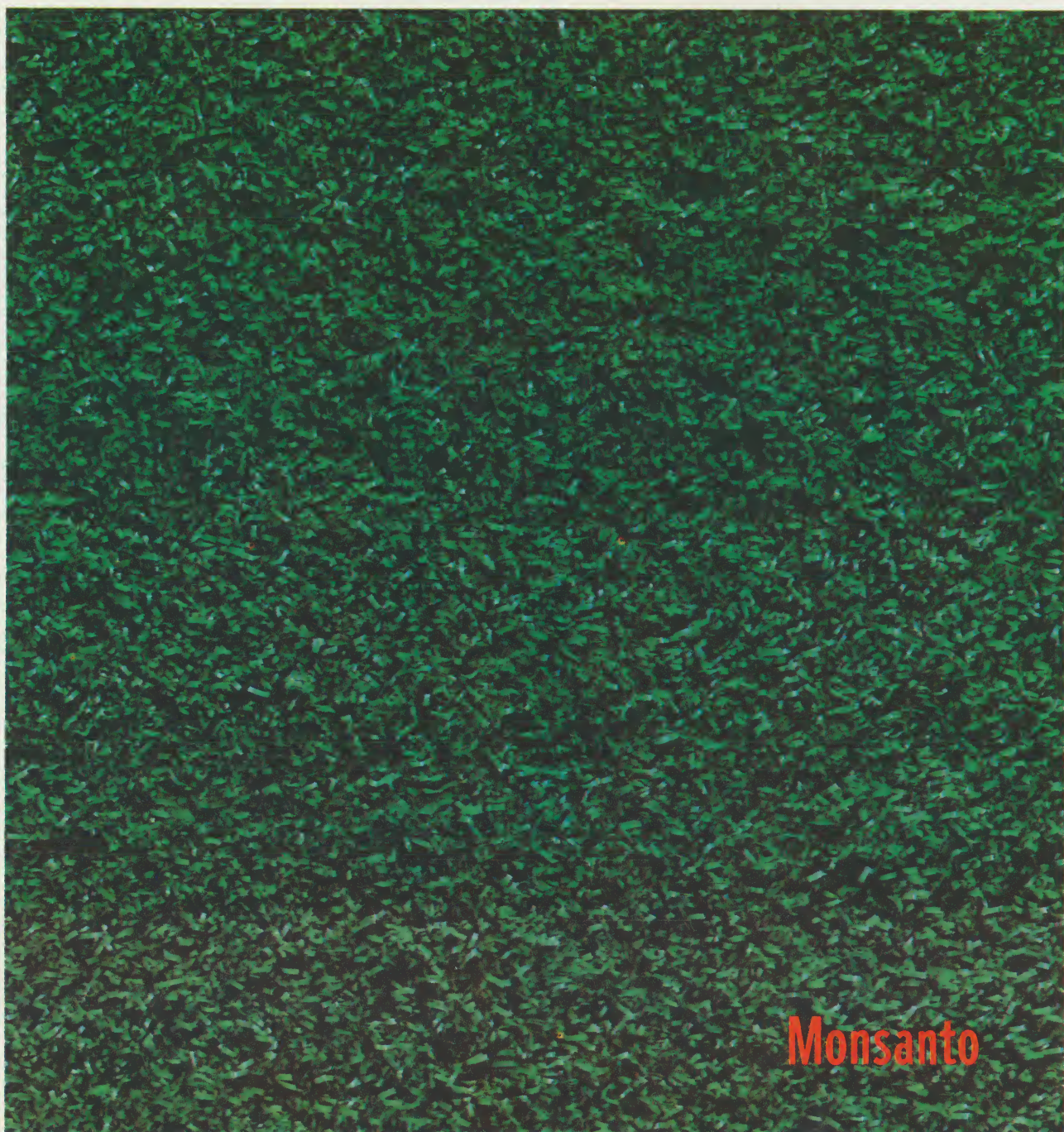
Moses Brown Field House, Moses Brown School, Providence, Rhode Island

AstroTurf®

Monsanto Recreational Surfaces

COMPLETE FAMILY OF...

NYLON...ALL-WEATHER...*Recreational Surfaces*



Monsanto

AstroTurf®

Monsanto Recreational Surfaces

Recreational Surfaces for... SCHOOLS, PLAYGROUNDS, STADIA

VALUES OF ASTROTURF®

Maximum land utilization, safety, aesthetic appeal, low maintenance, multi-use, long-lived wearability, minimum crowning, superior traction.

USES OF ASTROTURF®

Athletic fields, playgrounds, field houses, gymnasiums, stadia.

AstroTurf® Athletic Fields*

University of Alabama
The Astrodome
Boston University
Flint (Mich.) High School Stadium
Hofstra (L.I., N.Y.) University
Indiana State University
Seattle Memorial H.S. Stadium
University of Washington

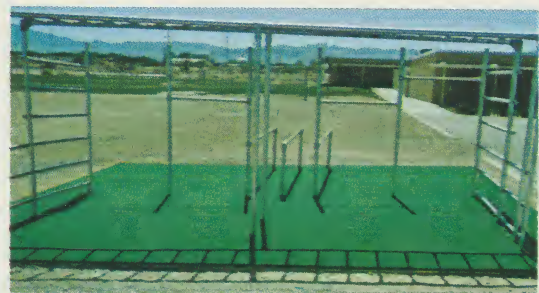
(*As of October 1, 1967)



above—
AstroTurf athletic field, High School
Stadium, Seattle, Washington.

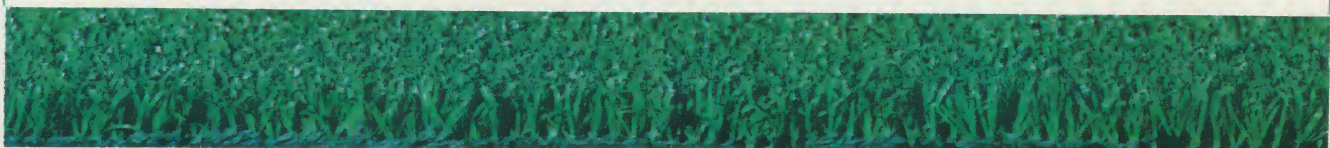


right—
Footwear for
AstroTurf field



left—
AstroTurf field house, Adams State
College, Alamosa, Colorado

above
AstroTurf playground
Lewis Rowe School
Las Vegas, Nevada



Monsanto 5.

AstroTurf®

Monsanto Recreational Surfaces

Recreational Surfaces for.. GOLF COURSES AND RELATED AREAS

VALUES OF ASTROTURF®

Low-maintenance, heavy play, all-weather, quick installation, portable, true golf performance.

USES OF ASTROTURF®

Championship tees and greens, practice tees, practice greens at private, semi-private, municipal, par three and round the clock courses. Also for private home areas, apartment houses, military bases, schools, retirement homes. Portable green for practice indoors and out at home or for physical education instruction.

AstroTurf® Golf Installations

Happy Valley Golf Club, Lynn, Massachusetts
Orange Hills Country Club, Orange, Connecticut
Washingtonian Country Club, Rockville, Maryland
Scarsdale Country Club, Hartsdale, New York
Greenbriar Golf Club, White Sulphur Springs, W. Va.
Redford Golf Club, Detroit, Michigan
Western Hills Country Club, Cincinnati, Ohio
Milwaukee County, South Milwaukee, Wisconsin
Orak Country Club, Tulsa, Oklahoma
St. Andrews Golf Club, St. Charles, Missouri
McCabe Golf Club, Nashville, Tennessee
Indian Shores Country Club, Crosby, Texas
Bushnell Golf Club, Bushnell, Illinois
Glendoveer Golf Club, Portland, Oregon
Bermuda Dunes Country Club, Palm Springs, Calif.
La Costa Resort & Country Club, La Costa, California
Interbay Golf Club, Seattle, Washington
Waialay Country Club, Honolulu, Hawaii
Country Club of Virginia, Richmond, Va.
Par 3 of Lakeland, Lakeland, Florida
Portage Country Club, Akron, Ohio
City of Meridian, Meridian, Conn.
Woodmere Country Club, Woodmere, N.Y.
Wingfield Pines, Bridgeville, Pa.
River Greens Golf Club, Gladstone, Ore.



AstroTurf practice tee
Winged Foot Country Club
Mamaroneck, N.Y.



AstroTurf greens



Monsanto 7.

ENGINEERED CHARACTERISTICS OF ASTROTURF®

Weight—AstroTurf has nylon face fiber content of from 20 ounces to 42 ounces per square yard. For example, the athletic field (stadium) surface has 42 ounces of face fiber to meet the severe demands of football.

Filament Size—500 denier. Research by Monsanto has demonstrated that heavy denier nylon fiber is required for best performance.

Traction—Superior to natural grass or other artificial surfaces, wet or dry. Soccer-type shoes grip the 500 denier nylon ribbon, never allow cleats to catch in pad.

All-weather—The face yarn and entire AstroTurf system has been engineered to withstand all extremes of weather.

Ultraviolet Resistant—The 500 denier construction and specially UV-stabilized nylon polymer give maximum protection against ultraviolet attrition.

Construction—Green, grass-like nylon blades are locked into a high-tenacity polyester and nylon fiber backing. Under the athletic field and safety surfaces is installed a safety pad with high-energy absorption characteristics to protect the individual against violent impact. This safety pad, when combined with the 500 denier ribbon construction, gives AstroTurf superior impact absorbing ability over natural turf and other synthetic surfaces.

Drainage—Configuration of the pile surface permits excellent water drainage at grade slopes of 1-2%. For example, an athletic field will have a crown height of only 14-18 inches.

Pile Character—Typical pile character (athletic field surface). 1. Breaking strength of ribbon greater than 1,400 grams. 2. Abrasion resistance: less than 0.1 gram loss of pile ribbon per 1,000 cycles and no visible pulling, on Schiefer Abrader with 10 pound load (ASTM method D1175). 3. The bind of the tufts is greater than 2,500 grams (Instron tensile tester).



AstroTurf golf tee



above—

AstroTurf putting green
Merri Manor Apts.
San Gabriel, Calif.



left—

AstroTurf athletic field
University of Alabama
Tuscaloosa, Alabama

TECHNICAL BULLETINS

Complete technical information is available on AstroTurf. Contact any of our listed offices for the following publications:

- RS- 1, Surface Drainage of AstroTurf
- RS- 2, Footwear for Playing on AstroTurf
- RS- 3, Cleaning AstroTurf
- RS- 4, Resistance to Flammability of AstroTurf
- RS- 5, AstroTurf Surface Repair
- RS- 6, Removing Stains from AstroTurf
- RS- 7, Application and Removal of Striping on AstroTurf
- RS- 8, Cleaning Techniques and Equipment for AstroTurf
- RS- 9, Removal of Ice and Snow from AstroTurf
- RS-10, Water Removal
- RS-11, General Installation

AstroTurf®

Monsanto Recreational Surfaces ASTROTURF® REGIONAL OFFICES

Please address all inquiries to Monsanto Company, AstroTurf Recreational Surfaces at the sales office nearest you:

ATLANTA, Ga.—3400 Peachtree St., N.E., Atlanta, Ga. 30326. Phone: (404) 577-2260

CHICAGO, Ill.—3158 DesPlaines Ave., DesPlaines, Ill. 60018. Phone: (312) 774-7400

LOS ANGELES, Calif.
6670 East Flotilla St., Los Angeles, Calif. 90022. Phone: (213) 723-2492

NEW YORK, N.Y.—277 Park Avenue, New York, N.Y. 10017. Phone: (212) 922-4111

ST. LOUIS, Mo.
800 N. Lindbergh Blvd., St. Louis, Mo. 63166. Phone: (314) OX-4-1000

or write:

AstroTurf, Recreational Surfaces, 800 North Lindbergh Boulevard, St. Louis, Mo. Area Code 314, OX 4-1000.

